



NSF Discussion - Responsible Oversight & Research Misconduct Investigations

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The Office of Inspector General

- ✓ Recommend policies and practices designed to promote economy and efficiency and to detect and deter fraud, waste, and abuse.
- ✓ Work with NSF and its awardees to resolve issues
- ✓ Efficiency, Integrity, Outreach Functions
 - Our staff - administrators, attorneys, auditors, criminal investigators, and scientists.

OSTP Policy on Research Misconduct

- ✓ Definition and Policy for RESEARCH misconduct
- ✓ Defines Fabrication, Falsification, Plagiarism (FFP)
violation of peer review
defines “research” and the “research record”
- ✓ All Federal agencies that support internal or external research will adopt
- ✓ *Federal Register* final policy: December 6, 2000
(Vol. 65. No. 235), pp. 76260-76264



What is Research Misconduct?

- ✓ Research Misconduct is defined as fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results.
 - ✓ Fabrication is making up results and recording or reporting them
 - ✓ Falsification is manipulating research materials, equipment, or processes or changing or omitting data or results such that the research is not accurately represented in the research record.
 - ✓ Plagiarism is the appropriation of another person's ideas, processes, results, or words without giving appropriate credit.
 - ✓ Policy defines "research" and "research record"
- 



Findings of Research Misconduct

- ✓ A significant departure from accepted practices of the scientific community for maintaining the integrity of the research record.
 - ✓ The misconduct must be committed intentionally, or knowingly, or in reckless disregard of accepted practices.
 - ✓ The allegation be proven by a preponderance of the evidence.
- 



Features of OSTP Policy

- ✓ Discrete, separate phases: inquiry, investigation, adjudication, appeal
 - ✓ Reliance on community-based standards (“serious deviation” or “significant departure”)
 - ✓ Partnership with institutions
 - ✓ Level of intent and standard of proof
 - ✓ Confidentiality for subjects and informants
 - ✓ Fair, accurate, timely, fact- and document- based process
 - ✓ Similar actions to protect Federal interests - range from reprimand to debarment
- 



Points to Consider

- ✓ Timing for Implementing OSTP Policy and Agency Specific Issues
 - ✓ Mechanism of Implementation (how to avoid past pitfalls)
 - ✓ Integration of other Rules and Regs (PA, System of Records, FOIA, Civil/Criminal issues)
 - ✓ Issues Important to Resolution
 - ✓ Coordination with the Agencies and IG
 - ✓ Education and Investigation
- 



What Issues are Important in Resolution?

- ✓ Independence and Deferral
 - ✓ Confidentiality
 - ✓ Separation of Processes
 - ✓ Timely, Fact-based, Objective
 - ✓ Intent
 - ✓ Burden of Proof
 - ✓ Seriousness
 - ✓ Community Practices
- 

Allegations Reviewed (%)

✓ Intellectual theft	24	Fabrication in proposal	3
✓ Verbatim plagiarism	16	Data sharing	2
✓ False statements (CV & CPS)	9	Impeding research progress	3
NSF procedures	8	Conflicts of interests	2
✓ Falsification in a proposal	7	✓ Duplicate submissions	2
✓ Peer review violation	7	Mishandled investigation	1
✓ Mentoring or colleague abuse	6	✓ Data tampering	2
Retaliation	4	✓ Human subjects	1
✓ Fraud	3	Animal welfare	0.2
		Recombinant DNA	0.2

Findings of Misconduct as of April 2000:

- * 67% Plagiarism
- * 12% Fabrication
- * 12% Falsification
- * 9% Other

✓ Indicates a finding

NSF Model for Investigation

<u>Step</u>	<u>Time-frame Targets (45 CFR 689)</u>	
1. Receipt	30 days - OIG	
2. Inquiry	60 days - OIG	90 days - Awardee
3. Investigation	150 days - OIG	180 days - Awardee
4. Adjudication	30 days - NSF (Deputy Director)	
5. Appeal	30 days - NSF (Director)	

* Case may close without finding at any step

✓ Referral:

Awardees - 88% of investigations

61% accepted--39% require OIG investigation

✓ Provide on-site assistance



Actions

- ✓ Institution actions
 - ✓ NSF Letter of Reprimand
 - ✓ Correct the Record
 - ✓ Certification and Assurances
 - ✓ Remedial Education/Educate Others
 - ✓ Debarment (1-3 years)
 - ✓ Fund Recovery for fraud issues -
civil/criminal actions
- 

Institution Obligations

- **Awardees' Policies**

Awardee policies generally stipulate a process similar to the Federal government policy and include a requirement for the “misconduct” official to notify the affected agency (usually NSF or PHS) when an investigation is initiated.

Awardee policies mirror the expectation in the Federal policy that awardee officials notify the relevant Federal agency even before an investigation is initiated, if:

- 1) the seriousness of the matter warrants,
- 2) there are immediate health risks,
- 3) the agency's resources, reputation, or other interests need protecting,
- 4) Federal action is needed to protect interests of those affected by an investigation, or
- 5) the scientific community or the public should be informed.

Procedural Considerations

✓ Administrators

- Confidential independent process
- FOLLOW INSTITUTION POLICY
- Notify OIG WHEN initiate an investigation
- Fair, accurate, timely, objective and thorough review
- Careful documentation
- OIG provide assistance
- Presumption of innocence
- Integrated policies for investigation, adjudication, appeal, grievance
- Free of inappropriate bias and conflict
- FOIA and Privacy Act considerations

Procedural Considerations

✓ Informants

- Confidential Review
- Fair, objective assessment
- Inform involved individuals of case resolution

✓ Subjects

- Confidential review
- Ask first for information
- Defer investigations to awardees **β** Assessment by peers
- Multiple opportunities to provide input
- Independent adjudication
- Inform involved individuals of case resolution



Assessment of Awardee Efforts

- Assess report for accuracy, completeness, fairness, objectivity
 - Quality of evidence and witness statements
 - Seek factual evidence supported by documents
 - Sufficient evidence to meet proof and intent standards for each allegation
 - Determine if a significant departure from accepted practices
 - Ask clarifying questions
- Determine whether awardee followed through on actions it planned to take



OIG Investigation Report

- OIG prepares investigation report for NSF action
 - attaches all relevant evidence and meets standard of proof and intent requirements
 - contains recommendations for action
 - seek input from subject
 - OIG is not part of NSF decision-making process, nor is NSF part of OIG's investigative process
 - need to share information is carefully controlled to ensure adjudicator is not biased by knowledge of case
 - Follow up with awardee to improve investigative process
 - Inform all relevant parties of case outcome
- 



What is Misconduct in Science?

✓ NSF's definition:

Fabrication, falsification, plagiarism or other serious deviation from accepted practices in proposing, carrying out, or reporting results from activities funded by NSF; or

Retaliation of any kind against a person who reported or provided information about suspected or alleged misconduct and who has not acted in bad faith.

What is your institution's definition?





Factors Considered in Making Recommendations

Based on an evaluation* of:

- ✓ scientific community's assessment
- ✓ seriousness (potential interim action)
- ✓ intent
- ✓ evidence of a pattern
- ✓ involvement of other awards or agencies

Does your policy address these issues?

* using a preponderance of the evidence





Case Study

Plagiarism and Violation of Confidential Peer Review

Allegation:

OIG informed that a proposal contained text plagiarized from a declined NSF proposal, reviewer suspected of plagiarism.

Inquiry, Investigation, Adjudication

OIG conducts inquiry, to determine if allegation has substance, what does this mean?

Gather and review evidence

- source proposal, PI's proposal
- examine reviewer history

Contact PI and requested explanation for text and request that source proposal author not be used as reviewer

Determine sufficient substance
Defer investigation



The Facts after OIG Inquiry

- Copied text (methodology, rationale, statistical package) identical to material in source proposal
 - PI was not reviewer (received proposal from reviewer with request for assessment)
 - No permission from NSF to share proposal
 - PI claimed author barred by Department practice from review
 - Found same material (plus more) in funded NIH-proposal (insertions were in response to reviewer comments)
- 

What to do?

You are the responsible University official, notified of the allegations, what must you consider and what must you do?

- ✓ Review university's policies
- ✓ Review existing evidence
- ✓ Inform subject, university counsel
- ✓ Confidentiality and Conflict of Interests
- ✓ FOIA and Privacy Act
- ✓ IF REQUIRED--initiate inquiry:
Convene and brief inquiry committee
- ✓ Timely, thorough, document-based



Facts after University Inquiry

- Department policy did not exclude author
 - Effort to hide plagiarism by barring author from peer review
 - Multiple abuses (apparent plagiarism and violation of confidential peer review)
 - Possible evidence of pattern and self-deception
 - Sufficient substance to proceed
- 



Initiate Investigation

What should you, as the Institutional Official, do next?

- ✓ Notify NSF Office of Inspector General (OIG)
 - ✓ Provide inquiry report
 - ✓ Accept deferral of investigation
 - ✓ Consider offer for on-site help
 - ✓ Convene and brief investigation committee
- 



Facts after University Investigation

- Subject's NSF proposal contained 5 sections of text copied from author's confidential proposal
 - No permission from author, author not barred from review
 - Text was not offset or attributed
 - Subject understood proposal was confidential
 - Statements to OIG on statistical package, a methodology, rationale for experiments were "routine"
 - Statistical package was not available to subject
 - Actions were "improper, knowing, willful."
 - Single instance
 - preponderance of the evidence supported conclusions
 - misconduct in science
- 



University Adjudication

- Prevent subject from being PI on Federal grant or contract for 3 years
 - Bar from peer review for 3 years
 - Inform all co-investigators of finding for 3 years
 - Provide OIG with complete investigation report
 - Noted could not implement recommendation 1 and 2. Did not renew subject's appointment. Relocated him to different institute and retained NIH grant
- 



What does our Office do?

- ✓ Assess report and attachments
 - ✓ Determine Federal interest
 - ✓ Seek additional information from investigating committee
 - ✓ Conduct additional investigation to gather facts for Federal case
- 



Complete Investigative Facts

- In review of evidence, found additional plagiarism in previously submitted proposals
 - Additional plagiarism contradicted subject's testimony that he had never done this before (not an isolated instance).
 - Subject plagiarized text from two different sources into four different proposals
 - Selectively copied and inserted materials in response to reviewer comments
 - Acknowledged actions were improper
 - Understood principles of confidential peer review, timing showed copied proposal for later use
- 



What do we consider:

Is it misconduct?

What to recommend?

- ✓ Substantive matter?
 - ✓ Need to protect Federal interest?
 - ✓ Is institution action sufficient?
 - ✓ Documentable evidence?
 - ✓ Need to correct record, prospective impact
 - ✓ What were actions in prior, similar cases?
 - ✓ Send report with recommendation to adjudicator (NSF's Deputy Director)
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Adjudication:

What finding and actions should NSF take?

Prior to NSF's Adjudication:

- ✓ Through voluntary settlement agreement, ORI , required subject certify for 3 years to accuracy of proposals
- ✓ Subject barred from peer review
- ✓ in ALERT system for 3 years

NSF's adjudication followed discovery of additional plagiarism and dishonesty

- ✓ Debar for 2 years
- ✓ Barred from peer review for 2 years

Subject appealed to NSF's Director. Director upheld Deputy Director's decision.



Your Responsibility: Trusted System

- ✓ Protect complainant, subject, and witnesses
 - ✓ Presumption of innocence
 - ✓ Timely, fair processing
 - ✓ Integrated policies for investigation, adjudication, appeal, grievance
 - ✓ Free of inappropriate bias and conflict
 - ✓ FOIA, Privacy Act, and Conflict of Interests considerations
- 



Your Responsibility: Preventing Misconduct

- ✓ Education
 - * Support
 - * Mentorship
 - * Who's most vulnerable?
 - ✓ Seminars, incorporate in courses
 - * Definition of misconduct in science
 - * Expectations for ethical conduct
 - * Case studies
 - ✓ Clarify Collaborations
 - ✓ Consistent and fair enforcement
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Ethical Dilemmas Seminar

- ✓ Data Selection and Sharing
 - ✓ Sharing and Using Ideas
 - ✓ Authorship and Acknowledgements
 - ✓ Collaborations
 - ✓ Paraphrasing and Plagiarism
 - ✓ Mentorship/Advisor problems
 - ✓ Training Students
 - ✓ Merit Review
 - ✓ Obtaining Oversight Reviews
- 

Call Us for Assistance!

- Internet: www.oig.nsf.gov
- E-mail: oig@nsf.gov (smcgrego@nsf.gov)
- Telephone: 703-292-7100 (x4889)
- Anonymous: 1-800-428-2189
- Write: 4201 Wilson Blvd.
Suite 1135
Arlington, VA 22230

